

REMARKS

Claims 1, 67-75, and 77-84 stand rejected in the application. Claims 24-29, 35-36, 39-42, 44-51, 57, 58, and 61-65 are allowed. Claims 1, 70, 71, and 73 are amended, claims 67-75 and 77-84 are cancelled; and new claims 85-89 are offered with this Amendment. Upon entry of the amendments, claims 1, 24-29, 35-36, 39-42, 44-51, 57-58, 61-65, 70, 71, 73, and 85-89 remain pending. The Examiner is respectfully requested to reconsider and withdraw the rejection(s) in view of the amendments and remarks contained herein.

Support for the amendments is found in the specification and claims as originally filed. Applicants respectfully request entry of the amendments.

Interview with Examiner Brittain

Applicants thank the Examiner for the courtesies extended to inventor David Tomanek and Applicants' representative during a telephonic interview on April 29, 2005. All of the rejected claims were discussed in light of the Ihara reference. The Examiner explained his position that the rejected claims were unpatentable over the reference and noted that many claims contain allowable subject matter. Applicants explained their position that the language of the rejected claims distinguished the structure of the reference. Agreement was reached that claims addressing both Applicants' and the Examiner's concerns would be offered in reply to the Office Action.

REJECTION UNDER 35 U.S.C. § 112

Claims 82 and 83 stand rejected under 35 U.S.C. § 112 as failing to comply with written description requirement and/or for being indefinite. Applicants have cancelled claims 82-83 and respectfully request the rejection be withdrawn.

REJECTION UNDER 35 U.S.C. § 102/103

Claims 1, 67-69, 72-75, 79, and 80-84 stand rejected under 35 U.S.C. § 102(b) or in the alternative under 35 U.S.C. § 103 in view of the Ihara (U.S. Pat. 5,464,987) reference. Applicants respectfully traverse the rejection as applied to the amended claims and request reconsideration.

Independent claims 1, 68, 74, 81, and 84 stand rejected over the Ihara reference. The rejected independent claims contain various structural limitations offered for the purpose of distinguishing the structure of Applicants invention from the disclosure of the Ihara reference. Such limitations include that the nanotubes extending from a plurality of fastening elements

- 1) become mechanically interconnected as the first and second fastening elements are joined by advancing toward each other (claim 1);
- 2) are functionalized so as to obtain mating fastening elements, wherein the nanotubes are disposed so as to become mechanically interconnected as the elements are advanced toward each other (claim 68);
- 3) structurally modified to include bent portions, wherein the nanotubes are so disposed that the fastening elements become mechanically interconnected as the elements are advanced toward one another (claim 74);
- 4) are disposed so as to become mechanically interconnected as the first and second fastening elements are joined by advancing toward each other, and wherein the extending nanotubes are disposed so that the action of advancing the elements toward each other results in the mechanical interconnection (claim 81); and
- 5) are functionalized so as to maintain mating fastening elements, and wherein the nanotubes are disposed such that an action of advancing the elements toward each other causes the elements to become mated and fastened (claim 84).

Applicants respectfully maintain their position that the Ihara reference does not disclose or suggest any of the limitations above. However, to expedite prosecution, Applicants have canceled some rejected claims; amended claim 1 and other claims to depend from claim 1; and offered new claims 85-88. Applicants reserve the right to file continuing applications to pursue the rejected claims.

Claim 1 is amended to recite and clarify that the nanotubes themselves comprise two ends, a first of which is attached to the substrate and a second of which is free of the substrate surface. In effect, the subject matter of former claim 67 (now canceled) has been clarified and incorporated into claim 1. The structure recited in amended claim 1 distinguishes the structure of the Ihara reference, which can be regarded as showing attachment at the termini of the loops as one end, with a second end being the center portion of the loop distal from (and thus free of) the surface. Claims 70, 71, and 73 are amended for clarity and to depend from amended claim 1. They are patentable because they depend from an allowable claim 1. Accordingly, Applicants respectfully request the rejection of claim 1, 70, 71, and 72 be withdrawn.

Claims 67-75 and 77-84 stand rejected in the Office Action. Applicants have canceled these claims and respectfully request the rejection be withdrawn.

NEW CLAIMS 85-88

New claims 85 through 88 are offered to further distinguish the claimed invention over the disclosure of the Ihara reference, using a limitation discussed by the Examiner with regard to previous claim 83. Claim 85 recites that extending nanotubes are disposed so as to remain permanently fixed to their respective fastening elements during the action of advancing the elements toward each other. Applicants respectfully submit that the structure recited, i.e., a disposition so as

to remain permanently fixed during the action of advancing the element toward each other further distinguishes the subject matter of claim 85 from the Ihara reference.

In the Office Action, claim 83 -- containing the limitation now recited in claim 85 -- was rejected under 35 U.S.C. § 112 because of a deficiency in wording. Specifically, the Office Action stated the claim did not particularly point out that the nanotubes on both fastening elements must be permanently fixed to the respective fastening element during the advancing the elements toward each other. Because the claim as previously presented did not point out that nanotubes on both fastening elements must be permanently fixed, the Examiner took the position that the subject matter as claimed still was within the disclosure of the Ihara reference. Applicants have cancelled claim 83 and presented the novel limitation in claim 85 and in claims 86-88 that depend from claim 85.

For these reasons and the reasons discussed above, Applicants believe that claims 85-88 are also patentable over the Ihara reference. Accordingly, Applicants respectfully request they be passed to a state of allowability.

CONCLUSION

For the reasons discussed above, Applicants believe that claims 1, 24-29, 35-36, 39-42, 44-51, 57-58, 61-65, 70, 71, 73, and 85-88 are in a state of allowability and respectfully request an early Notice of Allowance. The Examiner is invited to telephone the undersigned Applicants' representative if that would be helpful to resolving any issue.

Respectfully submitted,

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